

Poster Session I

#22

The Impact of Lung Cancer Screening on Smoking Behaviors: Integrative Literature Review

Hermine Poghosyan, BSN, MPH, University of Massachusetts Boston, Boston, MA ~ Mary E. Cooley, Dana-Farber Cancer Institute, Boston, MA ~ Lisa Kennedy Sheldon, PhD, APRN, BC, University of Massachusetts Boston, Boston, MA

Purpose: Helical Computed Tomography (CT) has emerged as a potential screening test for lung cancer. Identification of an effective screening test for those at high risk of developing lung cancer would enable earlier diagnosis and the potential for curative treatment. An important component of care surrounding the use of this technology is the impact of screening on decisions surrounding smoking cessation. The aim of this integrative literature review is to synthesize the evidence regarding the impact of lung cancer screening with CT on smoking behaviors of current and former smokers.

Theoretical Framework: Ganong's framework was used to guide this review.

Methods: Computerized data-bases were used to identify articles. Inclusion criteria for studies were: empirical studies, English language, smoking behavior change after CT screening for lung cancer, and published before September 2010. Ten studies met inclusion criteria. Data related to smoking behaviors, motivation to quit smoking, type of cessation interventions used and interest in cessation were extracted from the articles. Content analysis was used to synthesize the results of the studies.

Results: Studies were mixed about the impact of CT screening on smoking quit rates. The quit rate among participants ranged from 6.6% to 42% after screening. Among current-smokers, smoking abstinence was associated with older age, worse pulmonary function, and having multiple abnormal CT findings. Motivation to quit smoking, within the next 30 days, ranged from 14% to 35% among smokers. Factors associated with increased motivation were older age, lower nicotine addiction, fewer lung cancer symptoms, higher self-efficacy, and acknowledgment of the advantages of quitting smoking. Relapse rates among former smokers were 10% after CT results. All studies used minimal smoking cessation interventions. Interest in receiving smoking cessation interventions as part of CT screening ranged from 54-86%.

Conclusion and Implications: CT screening for lung cancer appears to be a teachable moment to address smoking cessation. Interest in receiving smoking cessation interventions as part of CT screening was high. More intensive interventions may enhance cessation rates. Further research is needed to better understand the impact of technology on decisions surrounding smoking cessation and the efficacy of cessation treatment. Nurses can play a key role in leading tobacco control efforts among those at high risk for lung cancer.